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Review Comments to the Supplement to the Yucca Mountain Draft

**Environmental Impact Statement** 

## Dear Dr. Summerson:

These comments have been prepared by Lincoln County and the City of Caliente through their Joint City/County Impact Alleviation Committee (JCCIAC). While we commend the Department of Energy for issuing a supplement to the Yucca Mountain DEIS, Lincoln County and the City of Caliente remained concerned that the Department has yet failed to address important issues relating to the environmental consequences of developing and operating the repository system in Nevada. In particular, we regret that DOE did not take the occasion of issuing a supplement to select and evaluate I detail the impacts of a preferred mode and route for transporting spent nuclear fuel and other radioactive waste through Nevada to the Yucca Mountain site. The County and City were joined by the Nuclear Regulatory Commission and many other commentors in recommending that further specification and evaluation of transportation impacts be included in the EIS.

I must assume that DOE is intending to specify a preferred mode and route and to evaluate related impacts in the Final EIS. I would encourage DOE to consider and address the following comments to the Supplemental Draft EIS (SDEIS) in the Final EIS. We believe a DOE election to address these comments in preparing the Final EIS will result in a document which more fully considers the environmental consequences of constructing and operating the Yucca Mountain repository system. Failure by DOE to adequately address these comments may render the Final EIS legally insufficient.

General Comments – As noted above, the SDEIS, while addressing important repository design and operational issues, fails to provide specificity in other important aspects of the repository system. Of major importance to Lincoln County and the City of Caliente is the transportation of radioactive waste through Nevada. The SDEIS should have included specification of the preferred mode and route for transport of spent nuclear fuel and other high-level radioactive waste through Nevada.

The S&ER flexible design addressed within the SDEIS posits the potential for the repository to be operational (performance monitoring) and under a NRC license for up to 300 years. The SDEIS does not address the institutional requirements and costs for performance monitoring, particularly at the state and local government levels. If the repository is operating in a performance-monitoring mode for up to 300 years, a capability to remove the waste and transport it to off-site locations may be necessary. Hence, any intermodal facilities at Caliente would need to be maintained in a ready-to-operate mode for many years after emplacement ends and during the time when waste retrieval may be required. The SDEIS does not address the potential for a longer operational life for intermodal facilities.

The SDEIS does not provide a summary analysis of the risk benefit/cost implications of the S&ER flexible design versus the design assumed in the DEIS. Without such analysis it is not possible to conclude that the S&ER flexible design results in enhanced protection of public health and safety or at what cost. As such, the SDEIS does not provide a basis for the DOE to select the S&ER flexible alternative over others under consideration.

Page S-2 - The flexible design enable younger and/or hotter fuel to be shipped to the repository? The SDEIS does not consider what effect this capability will have on transportation risk?

Page S-2 —At a March 29 workshop in Caliente, Nuclear Regulatory Commission staff observed that utilities are considering use of multi-purpose dry-cask storage/transportation systems (and that NRC anticipates licensing same) which would require spent fuel to be handled only once prior to shipment to a repository. The SDEIS does not consider the possible use of such shipping/dry-cask storage systems, which could be placed aboveground at Yucca Mountain to achieve fuel aging/cooling objectives. The SDEIS should consider the transportation implications of such multi-purpose dry-cask storage/transportation systems.

**Table S-2** – For some impact parameters addressed in Table S-2 a range of impacts are provided and for other a single impact estimate is offered. A range of impacts should be offered for all impact parameters included in Table S-2.

Table S-2 - The SDEIS predicts a 30 to 60 percent increase in material transport related traffic fatalities under the low temperature alternative yet offers no suggestions for mitigating increased transportation risk nor considers whether any mitigation measures proposed in the DEIS remain valid. The implications of increased material transport through Lincoln County and the City of Caliente should be addressed in the FEIS.

**Table S-2** - The SDEIS predicts up to a 50 percent increase in worker transport fatalities. 10 This significant increase does not correlate with the estimated increase in workers ("small increase"). The SEDIS should also consider how many of these fatalities will result from accidents in Lincoln County and related impacts upon emergency first response and emergency medical services in the County. Page 1-2 - The potential for the Yucca Mountain geologic formation to accommodate spent fuel in amounts beyond that considered within the DEIS (due to the closer spacing to be 11 achieved through the flexible design) is not considered within the SDEIS. A new estimate of the total potential spent fuel and other high-level radioactive waste that could be emplaced in Yucca Mountain should be included within the FEIS. Page 2-3 - The SDEIS should have considered location of titanium drip shield, emplacement 12 pallets and other required off-site manufactured goods in Lincoln County to, in part, mitigate otherwise unmitigable impacts. Page 2-4 - A tradeoff analysis considering the risk-cost benefit of increased ventilation 13 versus previously considered design options should have been included in the SDEIS. Page 2-6 and 2-7 - The SDEIS should consider what, if any, effect closer spacing of waste 14 packages has upon the probability and consequence of a volcanic dike encountering one or more waste packages. Page 2-8 - The socioeconomic impacts associated with an aging related extended 15 emplacement period are not addressed. The potential for extended emplacement to result in a prolonged transportation campaign is not addressed within the SDEIS. Page 2-11 - The installation of drip shields at the time of repository closure may result in transportation of said shields to the site over a relatively short period of time (rather than over 16 the period on emplacement). The SDEIS does not consider the transportation accident and fatality risk associated with a short-duration campaign to ship drip shields to the site. A mitigation measure might include installation of drip shields immediately following emplacement. Figure 2-4 - Figure 2-4 of the SDEIS refers only to direct rail access and heavy-haul access 17 to the site. The text on Page 2-12 refers to legal weight trucks. It is not clear if DOE anticipates legal weight trucks being used to transport waste directly to the Yucca Mountain site. | Page 2-15 – The use of dual-purpose dry cask storage/transportation systems for commercial 18 spent nuclear fuel should be considered in the SDEIS. Page 2-16 – The SDEIS should include an assessment of the additional risk associated with 19 creation of ventilation associated exposure pathways.

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- Page 2-19 The SDEIS should be more specific on the authorization DOE will seek (state or federal?) for needed water supplies.
- Page 2-19 The SDEIS should consider use of Pinyon-Juniper biomass from Lincoln County as an alternative to fuel oil for a central heating plant. Bureau of Land Management planned thinning of P-J woodlands over the life of the repository will result in large quantities of biomass.
- Page 2-21 The SDEIS concludes that up to 145 times more air will be moved through the S&ER flexible design. Why is not the risk associated with ventilation related exposure pathways not 145 times greater? There appears to be an inconsistency in the analysis.
- Page 2-28 Given DOE's planned 30 year performance confirmation timeframe, the Department should recommend that local government oversight funding be continued through this same period as a mitigation measure.
- Pages 3-4, 3-10 and 3-11 The SDEIS indicates that S&ER Design fatalities from air quality, occupational health and safety and accidents will increase from a low of 1.82 to 3.8 deaths. It is not clear that the long-term performance benefits from a latent cancer fatality standpoint are greater than the increase in short-term deaths. In fact Table 3-14 does not even address latent cancer fatalities. As a consequence, it is not possible within the SDEIS to conclude whether the S&ER flexible design is better from a fatality perspective. This is a critical shortcoming of the SDEIS.

DOE is encouraged to consider and address the aforementioned comments in preparing any additional supplements or the Final Yucca Mountain Environmental Impact Statement.

Sincerely,

Kevin Phillips

Vice Chairman, Joint City/County Impact Alleviation Committee

Mayor, City of Caliente

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